AMENDMENTS TO THE SPECIFICATION

Please amend the specification as indicated hereafter. It is believed that the following amendments and additions add no new matter to the present application.

In the Abstract:

Please replace the pending abstract with the newly-submitted abstract attached herewith on a separate sheet.

In the Specification:

Please amend the paragraph starting on p. 5, line 3 as follows:

The transfer device can be designed for single-pass or multiple-pass flow paths. A single-pass device accepts a flow from one side of the unit, and exhausts that flow on the 5 other side of the unit, wherein the flow makes a single-pass through the exchange media. A multiple-pass device, for example a double-pass device, enables the flow to traverse the wheel twice before being exhausted. In this double-pass embodiment, the length of the wheel can be half that used in relation to the length of the wheel in the single-pass device, but the wheel would be larger in diameter than the single-pass wheel. In an alternative embodiment of 10 the double-pass device, the flow may traverse the length of the housing assembly twice, but only encounter media in one trip (length) through the device. In this alternative double-pass embodiment, the length of the wheel can be equal to that used in relation to the length of the wheel in the single-pass device, but the wheel would be smaller in diameter than the double-pass wheel that has media in both passes.

Please amend the paragraph starting on p. 6, line 24 as follows:

Fig. 6 is ~~an~~ a cross-sectional view of an exemplary embodiment of the present invention.

Please amend the paragraph starting on p. 8, line 23 as follows:

Beyond fuel cell systems, other environments for the present species transfer device an include HVAC systems wherein the device is a heat exchanger, or a chemical process where various ~~gasses~~ gases and liquids may be removed, concentrated or transformed.

Please amend the paragraph starting on p. 9, line 1 as follows:

If Fig. 1 is viewed as a part of the cathode loop of a fuel cell, first stream **20** (upon exit of the device, first exiting stream **22**) could be air supplied to the fuel cell for use as the fuel cell's oxidant. The first stream **20** could be ambient air fed first through the species transfer device **10** before being sent to the fuel cell, which air has been both filtered and pressurized, and the second stream **30** could be the cathode exhaust stream exiting the fuel cell. In such an embodiment, it would be desirable to transfer the sensible and latent heat from the second stream **30** (cathode exhaust) to the first stream **20** (ambient air). The first exiting stream **22** would then contain a portion of the sensible and latent heat removed from the first stream ~~30~~ **20**, leaving the second stream **30** (upon exit of the device, second exiting stream **32**) without such portion of heat.

Please amend the paragraph starting on p. 10, line 7 as follows:

As used herein, the portion(s) of the media **80** being traversed by flows **20, 30** will be referred to as active sections of the media **80**. An active section of the exchange media **80** is capable of capturing at least a portion of a first species of the second stream **30** such that the second stream exits the media with a smaller concentration of the first species. Upon rotation of the media wheel, the same active section of the wheel first exposed to the second stream **30** is then traversed with first stream 20, wherein the active section is capable of transferring at least a portion of the captured species to the first stream 20 such that the first stream exits the housing assembly **40** with a greater concentration of the first species. Although described as a first species transfer device between a first and second stream, the present species transfer device is capable of enriching the first stream with a second species captured from the second stream, and enriching the second stream with the first species from the first stream.

Please amend the paragraph starting on p. 16, line 2 as follows:

A labyrinth seal can alternatively be used with a heat wheel **80** as shown in Fig. 6 wherein a rotary valve **162** is in radial form. The radial seal **164** divides the heat wheel **80** into

two sides, with wedges **166** on the left separated from the wedges **168** on the right. The spokes **172** hold pressure, and wiping seals **174** keep the streams from intermixing. In this embodiment of the species transfer device **10**, the inlets **24, 34** of the housing enclosure ~~42~~ 43 direct the first and second entering streams **20, 30** into the rotary valve **162**. By rotating the housing **40**, the first and second streams flow axially through the alternating media wedges **166** and **168**.

Please amend the paragraph starting on p. 9, line 1 as follows:

If Fig. **1** is viewed as a part of the cathode loop of a fuel cell, first stream **20** (upon exit of the device through a first outlet **26**, first exiting stream **22**) could be air supplied to the fuel cell for use as the fuel cell's oxidant. The first stream **20** could be ambient air fed first through the species transfer device **10** before being sent to the fuel cell, which air has been both filtered and pressurized, and the second stream **30** could be the cathode exhaust stream exiting the fuel cell. In such an embodiment, it would be desirable to transfer the sensible and latent heat from the second stream **30** (cathode exhaust) to the first stream **20** (ambient air). The first exiting stream **22** would then contain a portion of the sensible and latent heat removed from the first stream **30**, leaving the second stream **30** (upon exit of the device through a second outlet **36**, second exiting stream **32**) without such portion of heat.

Please amend the paragraph starting on p. 12, line 9 as follows:

Sealing system **45** of Fig. 3 provides a diametrical seal between the two flow paths **20** and **30**. Sealing system **45** can comprise a contact seal **108** and an intermediate plate **107**. Contact seal **108** can be made of low friction material. Suitable low friction materials include but are not limited to Teflon™ or Peek™. In one embodiment, contact seal 108 is in direct contact with the end of media 80 and is maintained there by constant pressure exerted by an arrangement of springs 109 acting between the housing 43 and the seal plate 108. The variable space between the seal plate 108 and the housing end 43 can be sealed, preferably by a congruent gasket, more preferably by a silicon gasket, that allows axial movement of the seal plate 108 while preventing flow between the seal plate 108 and the end of the housing 43. This slight axial movement allows for thermal expansion of the assembly and for wear of the sealing surfaces.

Please amend the paragraph starting on p. 12, line 9 as follows:

The double-pass transfer device comprises a housing assembly **40** having all the inlet and outlets at one end, the path end of the housing. Such an embodiment is shown in Fig. 8. The heat wheel is divided both annularly and in half, along the length of the wheel, such that four media sections are provided, a first and second half core and a first and second outer ring. The first stream **20**, for example fresh air, is directed by a first inlet at the path end of the housing through the first half core, and redirected at the other end of the spoke carriage, the redirecting end, to pass through the first outer ring before exiting through the first outlet . The second stream **30**, for example exhaust, is directed by a second inlet through the second outer ring, and redirected at the redirecting end of the housing to pass through the second half core before exiting through the second outlet. In this embodiment, between the redirecting end of the housing and the wheel is located a redirecting end plate **84** held in compressive communication with the wheel by springs or glue. The double-pass embodiment can also use the fully divided spoke carriage concept.